

BISHOP (L.F.)

COMPLIMENTS OF
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NEW YORK.

I.

THE SCIENTIFIC SPIRIT IN PRACTICAL
MEDICINE.

II.

THE IMPORTANCE OF THE HABIT OF
PROGNOSIS IN THE DEVELOP-
MENT OF THE INDIVIDUAL
PHYSICIAN.

III.

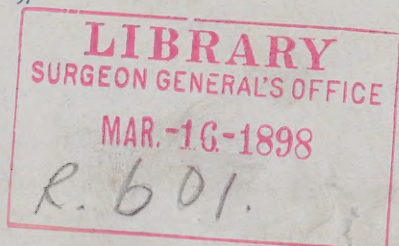
SOME POINTS, IMPORTANT FOR CON-
SIDERATION, IN THE TREAT-
MENT OF ACUTE LOBAR
PNEUMONIA.

BY

LOUIS FAUGÈRES BISHOP, A. M., M. D.,
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I.

THE SCIENTIFIC SPIRIT IN PRACTICAL
MEDICINE.

AN ADDRESS BEFORE THE SECTION ON GENERAL MEDICINE,
NEW YORK ACADEMY OF MEDICINE.

II.

THE IMPORTANCE OF THE HABIT OF
PROGNOSIS IN THE DEVELOPMENT
OF THE INDIVIDUAL
PHYSICIAN.

AN ESSAY READ IN THE SECTION ON PRACTICE OF MEDICINE
OF THE AMERICAN MEDICAL ASSOCIATION.

III.

SOME POINTS, IMPORTANT FOR CONSID-
ERATION, IN THE TREATMENT OF
ACUTE LOBAR PNEUMONIA.

A PAPER READ BEFORE THE NEW JERSEY STATE MEDICAL
SOCIETY.

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THE SCIENTIFIC SPIRIT IN PRACTICAL MEDICINE.*

In assuming the chair of the medical section of the New York Academy of Medicine, I can but feel the grave responsibilities which inhere to this position. In this section all the currents and undercurrents of our science should meet, to form a strong tide toward truth and unity in medicine. It is the duty of this section to uphold the dignity of general medicine in its relation to the other sciences and to the needs of humanity. The specialist has to do more frequently with local diseases, which, important though they may be to the individual at the time, still as a rule are mere incidents in his life. In conditions which permanently affect health and happiness, which lengthen or shorten life, and which threaten death, it is the general practitioner whose advice, counsel, and support are sought.

We must, in the first place, invoke the true scientific spirit to control our deliberations and direct our work. The scientific spirit places the love of truth above prejudice, expediency, or even immediate concrete application. It approaches all subjects with an open mind, willing to receive light from any source and whatsoever be the medium through which it comes. It denies nothing, however improbable, until it has been disproved; it accepts nothing, however plausible, until it has been verified by the experimental method. The scientific spirit, while it seeks enthusiastically new truth and rejoices in fresh fields, finds its truest expression in that love of exact knowledge which labors patiently and intelligently for the

*Reprinted from the report in the "Medical Record" of the Meeting of the Section on General Medicine of Feb. 16, 1897.

perfecting of established truth and the correction of error. Thus, while from time to time we may have presented to us new products of discovery, yet if we meet here to perfect, chasten, and simplify our knowledge of the fundamental art and practice of medicine, we shall accomplish what, to my mind, is the chief value of the work of this section, both to ourselves and to the profession at large.

Truth, however old, is always attractive. I remember, when the beauties of chemistry were first revealed to me, spending hour after hour repeating over and over again simple chemical reactions. There was nothing new to learn and nothing new to see in the immediate precipitations or the play of colors. The enjoyment consisted in the fact that after earlier years of harassing study in the school-room, there had dawned at last the image of something fixed and definite in human knowledge, the recognition of a sphere in which the appeal was to truth alone, and not to human authority or tradition.

We must not be discouraged with the constant repetition of medical and scientific truth. If we have the true scientific spirit, the repetition will give us pleasure, will give us a sense of stability, will strengthen our love of truth, and relieve us from the pathological craving for novelty. We should seek always that which is true, rather than that which is novel. But we should equally be ready to give a fair, impartial, and unbiased hearing to any one who has something which he believes contains the germ or truth. Many a man is saved from the propagation of a false theory, or the carrying on of a false system or practice, or even the founding of a new sect in medicine, by kindly criticism and correction; such kindly reception and criticism should certainly be granted to those who bring the results of honest thought and faithful investigation before a body of men actuated by the scientific spirit. Every living error has in it a germ of truth, that gives it vitality and allows it to

live. If by dogmatic assertion or violent criticism we attempt to destroy this error, the germ of truth may become forever inseparably adherent to falsehood; but take the new theory into the scientific assembly, allow it full expression and opportunity to vindicate itself, and by and by the gentle handling of mature and judicious minds will separate the little germ of truth, to add it to the sum of human knowledge, and the mass of error will fade so quietly away that its previous presence is almost instantly forgotten.

We, therefore, appeal to you to bring to this section the results of your work, however incomplete or unfruitful they may seem, and we pledge you a fair hearing, kindly criticism, and, we trust, helpful suggestion.

THE IMPORTANCE OF THE HABIT OF
PROGNOSIS IN THE DEVELOPMENT
OF THE INDIVIDUAL
PHYSICIAN.*

It is the duty of a physician to himself and to his patients, not only to be well informed, but also to seek such methods as tend to the best possible training for his work. Habits, good and bad, are the relentless masters of our lives and actions. Powerful as they are for evil, they are equally potent for good, if seized upon, developed, and directed. Habits of mind and thought are just as much habits as those pertaining to the physical nature.

Now there is a particular attitude in approaching a medical case that would seem, more than almost any other, to lead to sound judgments and judicious management, the attitude that takes account not only of present conditions, but discounts them by the probable future. It not alone considers what the course of disease will be, if treated, but its course if untreated or treated in a different way. This we may call the habit of prognosis, and upon it must be based all thoroughly judicious and honest therapeutics.

Medicine is a science and at the same time an art. Indeed, it is a combination of many sciences and many arts. Thus there is the science of pathology, the science of chemistry, the art of treatment, the art of feeding, the science of diagnosis, and the art of prognosis. The power of prognosis is at the same time an ac-

*Read in the Section on Practice of Medicine, at the forty-eighth annual meeting of the American Medical Association, held at Philadelphia, Pa., June 1-4, 1897. Reprinted from the Journal of the Association, July 10, 1897.

quirement and a gift. Like all other faculties, it is improved by exercise and increased by cultivation. Its basis, though largely personal experience, is equally found in a knowledge of medical literature. Thus the experience of a long lifetime may not afford as good a basis for prognosis in a particular case as an hour intelligently spent in a medical library. The faculty is best cultivated by the exercise of the habit of forming, with care and study, the most definite possible prognosis in every case that comes under observation, and then faithfully promulgating it to those who have a right to such an opinion. The first step in prognosis is accurate diagnosis, not the mere naming of disease, so that it may fall within the list of diseases such as is found in the index of a textbook of medicine, but the placing of a case in a particular group of a particular variety of the disease. Then, by recalling from personal experience and searching literature, as many parallel cases as possible are summoned as witnesses; then the mathematical theory of chances and probabilities is brought to bear, and the conclusion is reached. It seems strange, at first sight, that in an art so varied as medicine, mathematics should have any possible bearing, and yet in the almost parallel science of life insurance, mathematics has found one of its most useful applications. The life insurance company cannot say with certainty that a certain man of forty years of age will live so many years, but it can say with very close certainty of a particular group of ten thousand men, that so many will be alive and so many will be dead in ten years. It is the same way with the prognosis of particular classes of disease. If we can assemble, from personal experience and experience as recorded in literature, a group of one hundred of whom ninety have survived a year, we can give a prognosis in the particular case, all attending circumstances being carefully considered, that the chances of survival for a year are nine out of the ten; in the same way is the

prognosis of the time of recovery in particular cases. If we have summoned to our aid, truthfully, a group of parallel cases, and have intelligently discounted particular surrounding circumstances, we can give a prognosis as to the time of recovery which will be correct six times out of seven; seven times out of eight; eight times out of nine, or nine times out of ten, according to the breadth of our knowledge and the accuracy of our observation.

The value of the constant habit of prognosis cannot but be very great to the individual physician. It will give him encouragement and hope in many a desperate case, and save him from undue disappointment when the inevitable laws of nature have run their relentless course. He who has mastered the art of prognosis stands, as it were, on the summit of a mountain, where he can see beyond his fellows who have not climbed up the steep and laborious path. Observe the calm philosophy of this man, who, with his eye ever on the future, neither urges rash measures nor advocates undue delay, and who is not carried away by the promises of false prophets. He is not deceived by the bright coloring given to the landscape, by the passing meteor, into the belief that the face of all nature has been permanently changed.

The ideal opportunity for the study of therapeutics would be by the treatment of exactly parallel cases by several methods, and their comparison at the same time with cases untreated and pursuing the natural course of the disease. These conditions are only found in rare instances and in large hospitals. Usually, if cases are treated by various methods, it is at different times, and the mind pictures of older cases are dim and indistinct. The untreated case is hardly to be found. It is in supplying the place of untreated cases that the development of the habit of prognosis finds its most important place. By careful analysis of the case in hand, by summoning to one's use the records of previous cases accurately observed, by dis-

counting the treatment of one by the treatment of another, and observing the course and outcome under various conditions, one may construct an ideal case similar to the one in hand, but with its history continued into the future. This ideal case supplies a prognosis by which to be guided in the selection of therapeutic measures, the judgment of their efficacy, and the expectation as to cure.

Prognosis is often enough modified by the wealth or poverty of the patient, by his character, by his hopefulness or depression, and by a thousand other things that arise in the individual case, but the discussion of more exact methods of prognosis must find a place elsewhere. What would be emphasized is this, that every physician should form the habit of constructing a well-founded judgment as to the future course of any case of which he seriously undertakes the care. With this judgment he should constantly compare the course of this case while under treatment, and honestly acknowledge the futility of useless therapeutics, as well as the modifying influence of really valuable measures.

The remark is often made that prognosis is not worth while, that it does not influence the outcome of the case, that a wrong prognosis is apt to bring disrepute, and that it is better to treat the case from day to day, and leave the result with Providence. This is the reasoning of those who take a superficial, and as it were, a symptomatic view of disease; is the reasoning begotten of intellectual laziness, timidity, and self-conceit. How much more moral courage does the physician exhibit, who, throwing his whole intellectual acumen into a case, carefully studies all the circumstances, carefully summons to his aid his own experience, and that of others, and then having given the results of his very best work, is willing to stake his reputation on the result. Even from a lower standpoint, that of professional reputation and success, this in the long run pays best. The

greatest physicians in all times have made errors, but the consultants, the men whose counsel is sought in time of great danger, have been men of strong characteristics, who were able and willing to form an opinion and to stand faithfully by that opinion when formed. The mistakes of such men are apt to be condoned, while their successes become a glory to their profession, which obscure practitioners are proud to promulgate.

SOME POINTS, IMPORTANT FOR CONSIDERATION, IN THE TREATMENT OF ACUTE LOBAR PNEUMONIA.*

The proceedings of our medical societies are sometimes criticised by superficial observers, and by those who do not take an earnest part in the work, for the frequent recurrence of old topics and the absence of novelty and originality. Such persons mistake the office of the scientific medical society and the motives of those workers who can always be counted upon to express freely, honestly, and with humility what they know or to acknowledge their ignorance of any subject that may be brought forward. The object of the work is more to crystallize truth than to disseminate what is new. Such novel information has a spreading power in itself that easily carries it to the whole profession. In the medical society men gather to compare, correct, and fill out their experience. Here the immature views of young men germinate and develop, while even the oldest has his established beliefs pruned into better form by free discussion.

The introduction of the subject of pneumonia without special original observations, without new statistics, or even a settled plan of management, requires only the excuse that we are actively seeking the best plan of treatment. Every physician has some mode of procedure that he has acquired from his preceptor or has carried from his hospital. That any one shall approach the treatment of a case of acute lobar pneumonia with confidence of a successful outcome is impossible, so long as the present death-rate

* Read before the New Jersey State Medical Society at Atlantic City, June 22, 1897. Reprint from "Medical Record," August 14, 1897.

remains. A mortality approaching twenty-five per cent., which has not been materially diminished in modern times, is certainly sufficient reason for free and frequent discussion.

There are two ways in which the treatment of disease may be improved: By a gradual advance in the details of treatment, with a better appreciation of the disease and an improved technique; or some specific treatment may be discovered suddenly to supplant all previous plans and immediately reduce mortality. The more successful treatment of typhoid fever is an illustration of the first; diphtheria is an instance of the second. A number of specific treatments of pneumonia are claimed each year, but improvement is still confined to the elaboration of a better technique.

I will touch upon four topics—feeding, the prevention of delirium, hydrotherapy, and stimulation.

As to diet. In acute lobar pneumonia it has always seemed to me that the tendency was rather to overfeed. It is questionable whether, in the acute stages of the disease, with the undoubted accompanying congestion of the abdominal organs, harm is not often done by stuffing the stomach with milk to the production of large quantities of gas and upward pressure on the diaphragm. Now and again a feeble voice is raised against overfeeding in pneumonia. The lesson of feeding in other febrile diseases has been so well learned that the shortness of the course of pneumonia is not enough considered. There are undoubted benefits in restricted diet in a disease so acute. Overfeeding means a consumption of physiological force in the digestion and assimilation of food. It means the diversion of so much energy from the reparatory forces of the body to the digestive forces. It means throwing into the circulation a quantity of crude food products that must be taken care of. It means the presence in the intestinal canal of the waste matter of the food that must be gotten rid of. The patient dying of acute pneumonia does not

die from a lack of reserve force such as might be produced by a system of stuffed feeding, but rather from the failure of the development when needed of the latent force already existing. If by a system of over-feeding, such as would produce this more remote force, part of our stock of immediately available energy is used up, more injury than good is done. It is as if the captain of a ship with an important and pressing commission should stop to replenish the coal supply on the wharf when he should be on his journey, burning that in his well-filled bunkers. Diet should be bland and moderate in quantity. It would seem that only a misconception of the conditions of pneumonia leads to stuffing.

There is no disease in which it is more important to discount future events. An acute delirium in an alcoholic patient, when fully developed, frequently means a fatal termination. The feeble power of drugs to control this delirium, short of paralyzing the patient with dangerous doses, is only too well known. If at the outset of pneumonia in an alcoholic case we foresee that the day of delirium is bound to come, we can by the free use of safe sedatives avoid, or at least limit, this delirium.

The bromides are not sufficiently appreciated for their good qualities in acute disease. Their harmlessness has been so impressed upon me by the experience of treating a large number of epileptics, who took continually enormous quantities, that it has seemed desirable to consider their usefulness in other conditions. The reason that the bromides have so little reputation in emergencies, compared with morphine, chloral, hyoscine, and the hypnotics, is that they have been given in too small amounts. Other drugs get more fair treatment. We push them until we accomplish the result aimed at, or until the appearance of some danger symptom. With bromide, single doses of from five to thirty grains are too often given, and then resort is had to some other expedient. A solution of

bromide well diluted is not irritating to the stomach. It resembles very closely in its chemical and physical properties the saline salt solutions that we do not hesitate to put directly into the veins. It is not poisonous in any dose that any one would possibly apply. Its most glaring defects are the size of the dose and the slowness of the results. The fear of bromism that is constantly before the mind rests upon a foundation chiefly of tradition. It occurs in patients who have been taking large quantities for a long time, and is the result not simply of the drug itself, but of mixed causes, such as gastric irritation and deficient elimination.

If the alcoholic pneumonia patient is brought from the beginning of the disease under the influence of bromide in efficient quantities, the use of the more powerful and dangerous sedatives at a later period may be avoided. After delirium is once thoroughly established in pneumonia, bromide is a drug too mild to be efficacious. It should be begun in the very commencement of the disease in alcoholics and given freely, so that the patient shall get from two drachms to one ounce in the twenty-four hours. Lives seem to have been saved in alcoholic cases by the free use of bromides from the beginning.

The third point in the treatment of pneumonia that can well be discussed is the value of hydrotherapy. In going over the recent literature of pneumonia as found in the later text-books and systems of medicine, a restlessness and reaching out for new methods is perceived that is not found in the older ones. While we do not find among the conservative men who are usually selected as the authors of these books one who definitely recommends the exclusive use of hydrotherapy, still nearly all point to it as a possible, or even probable, improvement, and quote some other man in support.

The great problem that confronts us in this disease is the maintenance of the circulation in spite of the

obstruction due to the consolidation of the lung. To get the best results of management, we must regard the circulation as a whole, not concentrating our attention entirely upon the heart, or the pulmonary circulation, or the systemic circulation; but always remembering that what benefits one part of the circuit cannot but affect favorably the other. The stimulation of the heart, and the use of vasodilators to relieve its burden, are important, but hydrotherapy is not frequently enough employed in combating prostration and blood stasis. The difficulties and prejudices to be overcome before it can be generally adopted in pneumonia are so great that it is with some diffidence that one undertakes to break ground. Hydrotherapy has been so much the property of men who have prostituted medical science to the ends of mere personal profit that much of value has been lost to more conservative practitioners.

No one who has once witnessed the splendid results of systematic cold bathing in typhoid fever would be willing to be cut off from this resource in a severe case. In the same way, in pneumonia, the effect of hydrotherapy properly adapted to the condition of the patient would reduce mortality as much as in the case of typhoid fever. It can never be emphasized enough that the value of hydrotherapy extends far beyond the limits of the mere reduction of temperature. The effect is a general tonic to the nervous system, rehabilitating the heat-controlling forces of the body and restoring the tone of the circulation. To accomplish these results, the temperature and duration of the bath must be adapted to the case and the conditions present, but there is one element in the application of bathing that is of so much importance that one is almost tempted to speak of the treatment as tub rubbing, instead of tub bathing. While in the bath, the patient must be properly rubbed in every part of his body by a sufficient number of trained attendants. Without the rubbing properly carried out, the tub

bathing in an acute disease is indeed the fearfully dangerous procedure that it is often supposed to be by those who have not given the subject mature consideration.

The Brand method of treating typhoid fever gives a standard—the bath of 65° F., the rubbing by strong attendants during the whole time of immersion, the immediate removal to a dry bed, the precautions that a patient should never be bathed when the feet are cold, and that cold feet after a bath should be treated by application of warmth.

Every man, before undertaking the treatment of disease by the application of cold water, would do well to follow a few cases of typhoid treated by this method. Then he would be in a position intelligently to depart from the set system, according to the demands of each case. Thus the bath may be advantageously modified by only half covering the patient, and trusting to the attendants to apply water to that part of the body not covered.

A very suggestive paper by Dr. F. Gundrum of California, in the *Therapeutic Gazette* of last year, emphasizes the importance of hydrotherapy in pneumonia. He found that by placing a blanket in the bath under the patient, the treatment was rendered less objectionable. He states that in his experience packs were found a useful adjunct when for any reason frequent baths were difficult to give, but whenever the temperature went above 103° F., he resorted to the baths. With all other writers, he emphasizes the fact that equal in value to the reduction of temperature is the general nervous stimulus of the cold water and the rubbing. The effect of cold water in health, as a refreshing and stimulating agent, needs to be remembered.

Without detriment to the treatment, the baths may be commenced at a temperature of 80° or 90° F., and then, while the patient is being thoroughly rubbed, the temperature may be reduced by the addition of

cold water. This lessens the shock somewhat with sensitive persons.

In the discussion of the hydrotherapy of pneumonia, curiously enough, we come upon the old question of heat or cold in the treatment of disease, emphasizing once again the only possible answer to this dispute of two thousand years' standing,—that there is good in both. The ground for belief is strong in the experience of every one of you that in pneumonia, heat applied to the chest by poultices, hot-water coils, or other means, has a beneficial effect upon the morbid processes within the chest. It certainly benefits commencing œdema, from whatever cause, and is said to hasten the cycle of the pneumonic processes. That heat is good, I firmly believe; on the other hand, there is good authority from some of the best observers in the world that cold applied to the chest in pneumonia has also the power of influencing for good the course of the disease, cutting short the processes and hastening recovery. Thus between heat and cold we cannot decide absolutely, saying one is good and the other bad. It is even possible that there are times when the very hot bath might benefit a desperate case. In the Maternity Hospital, I have frequently studied the effect of such immersion in new-born children in whom vitality was at a dangerously low ebb.

The effect of a properly adapted bath was beautifully shown in the case of a child of seven. The child had pneumonia, with a very high temperature and rapid pulse. There was much venous stasis, and everything seemed to be going wrong. This child was put into a bath at a temperature of 90° F., and thoroughly rubbed for a period of about fifteen minutes. When the child was taken out of the tub and put back to bed, the temperature had fallen, the breathing was quiet, the pulse improved, and the whole picture had changed. The bathing without the rubbing would not have accomplished any such result.

In a discussion in the section of general medicine of the New York Academy on the treatment of typhoid fever by cold bathing, the influence of the baths as a respiratory stimulant was dwelt upon by Dr. A. B. Ball. It would seem that in pneumonia this action should be advantageous. Its wonderful tonic effect upon the nervous system, equalizing the circulation and bringing about physical rest, has astonished every one who has had the opportunity of studying fever cases so treated. Increase in the secretion of urine, such as is a constant observation in fever patients who are taking baths, would suggest improved elimination of toxine.

The reports of the treatment of pneumonia in which bathing was used as a tonic and supportive measure, as opposed to merely anti-pyretic baths, are very meagre. Professor Bozzolo says: "After a considerable number of observations: (1) Such baths are well borne in severe cases; they never produce collapse. (2) They lower temperature rapidly and notably, and keep it down for a considerable length of time; they may be repeated every three hours. (3) The mortality per cent. among patients treated thus with cold bath is among the lowest recorded under any form of treatment." *

The fourth and last topic is the management of the circulation. Every thoughtful physician has a philosophy of his own that guides him in the choice of means of stimulation. The direct care of the heart is equal in importance to the attention to delirium and the destructive forces of high temperature. Every one who has watched a patient with pneumonia from the onset of the disease to a termination has felt that the heart was the organ upon which the brunt of the battle had fallen. There is no question of equal general importance or greater difficulty than that of heart stimulation. It is a problem to be approached with the utmost candor, because there are many points upon which it

* *Gazetta Medica Italiana*, July 2, 1881.

must honestly be confessed that definite facts are not known. The mechanism of the heart and circulation are admirably adapted to fulfil their functions. The heart has its wonderful nerve supply, both from the central nervous system and from the ganglia within itself. The blood-vessels are governed by the marvelous vasomotor system, with its millions of constrictors acting as a system of regulators whose perfection surpasses the comprehension of man. The automatic action of the respiratory and cardiac nervous centres also elude our complete understanding. In health the slightest mental or physical exertion is followed by an increased effort on the part of the heart and a corresponding deepening of respiration. When anything happens to cause obstruction to the breathing or circulation, the heart immediately responds with a large increase of labor to overcome the obstruction, and the lungs increase their activity to an even greater degree. Now, nature having provided this wonderful plan of increased activity to meet emergencies, the question of stimulation resolves into an inquiry as to whether we can by artificial stimulants supplement with advantage the natural stimulus that comes from the nervous system. We come face to face with the possibility of injudicious stimulation, or stimulation at the wrong time, which may exhaust the natural resources so that they will not respond at a more critical period. On the other hand, leaving stimulation, pure and simple, out of the question, can we not control the action of the heart and conserve its forces to calm the excessive stimulation of an excited nervous system, and in this way reserve the force required to tide over a critical period? In addition to stimulation and control, it would seem that nutrition of the heart was of great importance. Particular drugs cannot be discussed at much length. The best general plan of management of the heart in pneumonia is to conserve its forces early in the disease by the control of delirium by the use of proper antipyretic but at the same time tonic

system of bathing, and by the use of such drugs as will relax the general circulation and diminish the hyperactivity of the heart. Undoubtedly, with all its disadvantages the aconite group of drugs affords very valuable properties.

The importance of the philosophical consideration that it is the right side of the heart instead of the left which is chiefly in danger of exhaustion seems to impress itself with difficulty upon the profession. Dr. Andrew H. Smith has for a long time advocated the study of the pulmonic second sound as a guide to prognosis. Still it is not perfectly clear that we have any means at hand by which we can stimulate one part rather than another, nor, indeed, with all that has been studied and written, is the mechanism of the circulation so well understood that we can proceed to a very great degree in the treatment of particular parts of it with confidence. After all is said, when we recall to mind the impression made upon us by a critical case of pneumonia at the critical period, it is of an effort to apply cardiac and pulmonary stimulants with the object of tiding our patient over. Before my mind is a patient surrounded by the paraphernalia of the sick-room and the anxious attendants, but more distinctly there stands out in my imagination a picture of a struggling heart and certain alkaloids, notably strychnine, atrophine, digitalin, and cocaine, that must be applied hour by hour to keep this heart from failing in its task. After one has cared for a case like this, it is often difficult afterwards to describe just what doses were given, as each was administered according to immediate indications. In Wood and Fitz's new text-book on practice, we find the following recommendation that appeals to our judgment of stimulation in a severe case, the drug to be given hypodermically if not well borne by the mouth: Strychnine, one-twentieth grain, every four hours, and cocaine, one-sixth grain, every four hours, alternating so that one or the other is given every two hours. The strychnine may

be slowly increased to one-fourteenth grain and the cocaine to one-half grain. Dr. Wood thinks he has seen life saved by even larger doses. Certainly a well-thought-out and courageously-applied plan of stimulation offers the only hope for critical cases.

Time compels the omission of the discussion of the place of alcohol, belladonna, nitroglycerin, and digitalis in pneumonia. Nor can the place of bleeding be touched upon, but these will doubtless be taken up in the discussion.

Faith in the value of hydrotherapy in pneumonia is more the gradual growth of time and thought than a belief founded upon any special line of experiment or the teaching of any single person. The literature, though curiously meagre considering the importance of the subject, is entirely favorable to the views expressed above. Many occasions arise in the course of pneumonia when a tub bath of moderate temperature, carried out with skilful rubbing, would benefit the patient more than a great deal of drug stimulation. To follow such a method requires courage, apparatus, and skill. In advocating it at this time we can only hope to stimulate thought, with the desire that means may be found to adopt this important measure in practical medicine. When reason is convinced, no valuable addition to therapeutics must be discarded on account of apparent difficulty or pre-existing prejudice. It was my privilege to witness the introduction of the cold-bath treatment of typhoid fever into a large hospital, and I have listened to all the objections that will be raised again in the application of hydrotherapeutics to pneumonia, and yet we have all seen this method accepted in typhoid fever by every one who has had the opportunity of observing cases under treatment.

Until an antitoxin is discovered, the treatment of pneumonia must be in its final analysis expectant, and, valuable though it may have been to review the various means by which the patient is protected from

mortal injury by the disease and supported to resist it, still in the application of each and every one of these measures the judgment of the individual physician at the particular time must have influence greater than the voice of any authority. It is this quality of judgment that is found in its most excellent development in the general practitioner occupying the field a little removed from the atmosphere of theoretical teaching and extreme specialism. To such men it is a privilege and an advantage to bring the results of thought, study, and research, and from them I trust my conclusions may be reflected back with the additional light of well-digested experience.

30 West Thirty-sixth Street.

"One of the pleasantest courtesies that physicians can grant each other is the acknowledgment of the reprints of papers that they distribute among themselves."

